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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,745	09/20/2001	Marc Birkner	032326-139	7104

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EXAMINER

KIM, JUNG W

ART UNIT PAPER NUMBER

2132

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,745

Applicant(s)

BIRKNER ET AL.

Examiner

Jung W. Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-36 are pending.
2. Applicant amended claims 1-4, 6-8, 10-14 and 16-36 in the preliminary amendment filed on September 20, 2001.

Information Disclosure Statement

3. The items listed on the information disclosure statement (IDS) filed May 12, 2001 has been considered.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy is included in the instant application.

Specification

5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 112

6. Claims 1-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention. The independent claims recite "permitting some transitions amongst all possible transitions"; however, the specification only enables permitting some transitions amongst all transitions stored in a table of permitted state transitions.

Specification, pg. 11, 1st full paragraph.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Regarding claims 1-36, the recited portions of the claims in parentheses render the claims indefinite because it is unclear whether the limitations within the parentheses are part of the claimed invention. See MPEP § 2173.05(d).

10. Claims 12-36 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the feature of the object that defines the current state of the object; this is an essential structural relationship because without such a relationship, it is unclear what feature of the claimed invention is being modified when the state is altered.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

12. Claims 1, 2, 7, 10-17 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Chan et al. USPN 6,005,942 (hereinafter Chan).

13. As per claim 1, Chan discloses a device for controlling the life cycle of a portable electronic object, the life cycle being determined by a succession of state transitions, the states determining the services offered by the object, the object comprising a processing unit, a volatile memory, program memories and data memories, each of the memories having a content defining a plurality of configurations (fig. 1 and figs. 3A and 3B; col. 13:35-14:23), wherein the device comprises means for controlling the transition

from a first state to a second state of the portable electronic object, including means for selectively enabling and/or inhibiting state transitions, so that only some transitions are permitted amongst all the possible transitions (figs. 7A and 7B, col. 12:43-67).

14. As per claim 2, the rejection of claim 1 under 35 U.S.C. 102(e) is incorporated herein. (supra) In addition, the control means comprise means of checking the content of the volatile memory, the data memories and the program memories of the portable electronic object as a function of the state transition to be effected (col. 12:65-67; figs. 4-6 and 9-10 "Card Domain").

15. As per claim 7, the rejection of claim 1 under 35 U.S.C. 102(e) is incorporated herein. (supra) In addition, the control means comprise means for triggering actions during the processing of a request for transition crossover from a first state to a second state of the portable electronic object (col. 12:46-50).

16. As per claim 10, it is a claim corresponding to claim 1 and it does not teach or define above the information claimed in claim 1. Therefore, claim 10 is rejected as being anticipated by Chan for the same reasons set forth in the rejections of claim 1.

17. As per claim 11, the rejection of claim 1 under 25 U.S.C. 102(e) is incorporated herein. (supra) In addition, the device is a smart card (col. 3:22-45).

18. As per claim 12, Chan discloses a method of controlling the life cycle of a portable electronic object, the life cycle being determined by a succession of state transitions, the states determining the services offered by the object, the object comprising a processing unit, a volatile memory, program memories and data memories, each of the memories having a content defining a plurality of configurations, (fig. 1 and figs. 3A and 3B; col. 13:35-14:23) the method being implemented, within the object, following a state transition request, according to the following steps:

- a. a step of validation of the enabling of the request using means of enabling and/or inhibiting state transitions; and modifying the current state of the object if the requested transition is enabled (figs. 7A and 7B, col. 12:43-67; 16:16-29; 17:15-45: card domain validates and modifies the current state).

The aforementioned cover the limitations of claim 12.

19. As per claim 13, the rejection of claim 12 under 35 U.S.C. 102(e) is incorporated herein. (supra) In addition, the method comprises a step of executing systematic actions associated with the requested transition (col. 12:66-67).

20. As per claim 14, the rejection of claim 12 under 35 U.S.C. 102(e) is incorporated herein. (supra) In addition, the method includes the following steps:

- b. evaluating checks on the configuration of the object, checks associated with a permitted transition; modifying the current state of the object if the checks

on the configuration of the object are satisfied (figs. 7A and 7B, col. 12:43-67; 16:16-29; 17:15-45).

21. As per claims 15 and 17, the rejection of claim 14 under 35 U.S.C. 102(e) is incorporated herein. (supra) In addition, the method further comprises executing positive actions performed if the requested transition is permitted and if the checks associated with the requested transition are satisfied (the actions taken by the card domain are positive actions).

22. As per claim 16, the rejection of claim 14 under 35 U.S.C. 102(e) is incorporated herein. (supra) In addition, the method further comprises executing negative actions if the checks associated with the requested transition are not satisfied (col. 16:63-64: an example of a negative action when a condition is not verified).

23. As per claim 36, the rejection of claim 12 under 35 U.S.C. 102(e) is incorporated herein. (supra) In addition, the method does not enable the crossover of a state transition, from an additive state to a reference state since all the defined states are reference states.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

26. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan in view of Wagner USPN 5,301,100 (hereinafter Wagner).

27. As per claim 3, the rejection of claim 1 under 35 U.S.C. 102(e) is incorporated herein. (supra) Chan discloses several permitted state transitions (Chan, figs. 7A, 7B and 8); but Chan does not disclose using a table of permitted state transitions. However, transition tables are well-known constructs in the art to categorize possible transitions between states; for example, Wagner discloses a table of permitted state transitions which describes the transitions and actions for each state. Wagner, fig. 8A. It would be obvious to one of ordinary skill in the art at the time the invention was made to use a table of permitted state transitions since it is desirable to define and identify the

possible actions of a finite state system in a simple data structure as known to one of ordinary skill in the art. The aforementioned cover the limitations of claim 3.

28. As per claim 18, it is a claim corresponding to claims 3 and 12, and it does not teach or define above the information claimed in claims 3 and 12. Therefore, claim 8 is rejected as being unpatentable over Chan in view of Wagner for the same reasons set forth in the rejections of claims 3 and 12.

29. Claims 4-6, 8 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan in view of Wagner and further in view of Silberschatz et al. Database System Concepts, Chapter 2, "Entity-Relationship Model" and Chapter 3, "Relational Model" (hereinafter Silberschatz).

30. As per claims 4-6 and 8, the rejections of claims 3 and 7 under 35 U.S.C. 103(a) are incorporated herein. (supra) In addition, Chan discloses checks made for a state transition and actions taken; moreover, Wagner discloses a state transition table wherein for a given transition, a set of conditions (checks) are verified, and if valid then a set of actions are actuated. Although, neither Chan nor Wagner suggest a table for checks and a table for actions, this arrangement is a trivial permutation based on a standard entity-relationship data model as taught by Silberschatz: entity sets describe certain objects in the abstract universe and relationship sets describe associations among several entities. Silberschatz, pgs. 23-28, sections 2.1.1-2.1.2. In the case of

the state transition table of Wagner, conditions to be checked and actions that are triggered are objects within a finite state system and would each be trivially separated into its own table. Silberschatz, pgs. 65-69, section 3.1.2. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made for the device to use a table of checks to be made per permitted state transition and a table of actions that are triggered during the processing of a request for transition crossover, since it is desirous to establish a relational organization for better coherency of the transition relations between states as known to one of ordinary skill in the art.

Moreover, extensions to each table are desirable features to expand the relations of a given table; this enables more flexibility within the schema by establishing more complex characterizations to each entity. Finally, a check engine is a necessary component for a device to utilize the tables comprising the state transition schema. The aforementioned cover the limitations of claims 4-6 and 8.

31. As per claim 19, the rejections of claims 4-8 and 18 under 35 U.S.C. 103(a) are incorporated herein. (supra) In addition, the method includes the steps of:

- c. using an entry corresponding to the requested transition, in a table of actions, and executing a program of actions defined by the entry (Wagner, fig. 8A; col. 11:1-33).

32. As per claim 20, the rejections of claims 4-8 and 18 under 35 U.S.C. 103(a) are incorporated herein. (supra) In addition, the method includes the steps of:

- d. using an entry in a table of checks, and executing a program of checks defined by the entry (Wagner, fig. 8A; col. 11:1-33; Silberschatz, pgs. 65-69, section 3.1.2).

33. As per claims 21 and 23, the rejections of claims 4-8 and 18 under 35 U.S.C. 103(a) are incorporated herein. (supra) In addition, the method includes the step of executing positive actions, if the requested transition is enabled and if the checks associated with the requested transition are satisfied, comprising the steps of:

- e. using an entry, corresponding to the requested transition, in a table of actions, and executing a program of actions defined by the entry (Wagner, fig. 8A; col. 11:1-33; Silberschatz, pgs. 65-69, section 3.1.2; Chan, figs. 7A and 7B, col. 12:43-67; 16:16-29; 17:15-45: the actions taken by the card domain are positive actions).

34. As per claim 22, the rejections of claims 4-8 and 18 under 35 U.S.C. 103(a) are incorporated herein. (supra) In addition, the method includes the step of executing negative actions if the checks associated with the requested transition are not satisfied, comprising the steps of:

- f. using an entry, corresponding to the requested transition, in the table of actions, and executing a program of actions defined by the entry (Wagner, fig. 8A; col. 11:1-33; Silberschatz, pgs. 65-69; Chen, col. 16:63-64).

Allowable Subject Matter

35. Claims 24-35 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st and 2nd paragraphs, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Harrison et al. 'Protection in Operating Systems' discloses a protection system as an HRU model wherein the system comprises a set of generic rights and a set of commands. The system defines a command as a set of checks on conditions, whereby if the conditions are valid, then a set of actions are actuated. The HRU model does not address state transitions.

Communications Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W. Kim whose telephone number is (571) 272-3804. The examiner can normally be reached on M-F 9:00-5:00.

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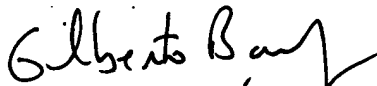
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jk
July 1, 2005

Jung W Kim
Examiner
Art Unit 2132



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